

WHAT IS CLAIMED IS:

1. A method for fabrication of a concrete floor comprising:
  - (a) deploying a plurality of interconnected floor-and-beam forming elements so as to construct a substantially horizontal floor mold, each said floor-and-beam forming element configured with at least one beam-forming trough flanked by floor-forming support; 5
  - (b) deploying a plurality of support plates such that at least one said support plate is deployed between adjacent ones of said beam-forming troughs so as to span a distance between said adjacent ones of said beam-forming troughs, said support plates connected to facing sides of said adjacent ones of said beam-forming troughs and an underside of said floor-forming supports, said support plates projecting downwardly substantially perpendicular to said floor-forming supports and substantially perpendicular to 10 a length of said beam-forming troughs;
  - (c) deploying a volume of fluid concrete onto a top surface of said floor area such that said fluid concrete substantially fills said beam-forming troughs and regions above said floor-forming supports are covered to a predefined depth; and 15
  - (d) allowing said fluid concrete to cure.

2. The method of claim 1, further comprising attaching at least one floor thickness guide to a top surface of at least one said floor-forming support, so as to facilitate determination of said predefined depth of said fluid concrete.

3. The method of claim 2, wherein said at least one floor thickness guide is implemented as a plurality of said floor thickness guides deployed such that said top surfaces of said plurality of said floor thickness guides is co-planar.

4. The method of claim 1, wherein said interconnection of said floor-and-beam forming elements is implemented such that a top surface of said 10 floor-forming supports is substantially co-planar.

5. The method of claim 1, wherein implementation of said interconnection includes attachment of two adjacent floor-forming supports.

6. The method of claim 1, wherein said support plates are implemented with an outer contour that is substantially equivalent to a cross section of an 15 area below said floor-forming support, between said adjacent ones of said beam-forming troughs and a line connecting bottom surfaces of said adjacent ones of said beam-forming troughs.

7. The method of claim 6, wherein said deploying a plurality of support plates includes insertion of tabs protruding from edges of said support plates

through corresponding slots provided in said floor-and-beam forming elements, thereby providing a plurality of anchoring points for said concrete.

8. The method of claim 1, wherein at least one of said plurality of support plates is implemented with precut holes to accommodate plumbing and  
5 electrical components.

9. The method of claim 1, further comprising deployment of a false bottom in at least one said beam-forming trough so as to prevent said fluid concrete from flowing therein so as to form a void in a bottom region of said beam-forming trough into which fasteners penetrate, thereby facilitating  
10 attachment of ceiling finishing material.

10. The method of claim 1, further comprising sealing at least one end of an area below said floor-forming support and between said adjacent ones of said beam-forming troughs by use of an end sealing plate deployed substantially adjacent to said at least one end and projecting downwardly  
15 substantially perpendicular to said floor-forming supports and substantially perpendicular said beam-forming troughs.

11. The method of claim 1, wherein said floor-and-beam forming element is implemented as an element fabricated from steel.

12. A method for the fabrication of a wall comprising:

- (a) deploying a plurality of interconnected substantially rectangular wall-forming elements on a floor, each said wall-forming element configured with at least two substantially parallel spaced apart substantially rectangular wall panels, wherein an outer surface of each of said wall panels is configured as a substantially finished wall surface, said at least two wall panels being coupled at each of four corners of said rectangle by wall-panel corner-connecting elements; and
- (b) deploying a volume of fluid concrete so as to substantially fill a region between said wall panels.

13. The method of claim 12, wherein each one of said plurality of said wall-forming elements is interconnected to adjacent ones of said plurality of said wall-forming elements by attachment of adjacent ones of said wall-panel corner-coupling brackets one to another.

15        14. The method of claim 13, wherein said wall-panel corner-connecting element is implemented as a substantially "L" shaped element, said wall-panel corner-connecting element thereby spanning at least a partial length of two sides of said wall-forming element when attached to said wall panels.

20        15. The method of claim 14, wherein said attachment of said adjacent ones of said wall-panel corner-coupling brackets one to another is implemented using self-tapping sheet metal screws.

16. The method of claim 14, wherein said coupling of said wall panels is implemented by providing a lengthwise groove in each edge surface of each said wall panels into which a tongue protruding from each said wall-panel corner-coupling bracket is affixed.

5           17. A system for fabrication of a concrete floor comprising:

- (a)       a plurality of interconnected floor-and-beam forming elements so as to construct a substantially horizontal floor mold, each said floor-and-beam forming element configured with at least one beam-forming trough flanked by floor-forming support; and
- 10          (b)      plurality of support plates such that at least one said support plate is deployed between adjacent ones of said beam-forming troughs so as to span a distance between said adjacent ones of said beam-forming troughs, said support plates connected to facing sides of said adjacent ones of said beam-forming troughs and an underside of said floor-forming supports, said support plates projecting downwardly substantially perpendicular to said floor-forming supports and substantially perpendicular to a length of said beam-forming troughs;

15           wherein a volume of fluid concrete is poured onto a top surface of said floor area such that said fluid concrete substantially fills said beam-forming troughs and regions above said floor-forming supports are covered to a predefined depth, and allowing said fluid concrete to cure.

18. The system of claim 17, further comprising at least one floor thickness guide attached to a top surface of at least one said floor-forming support, so as to facilitate determination of said predefined depth of said fluid concrete.

5           19. The system of claim 18, wherein said at least one floor thickness guide is implemented as a plurality of said floor thickness guides deployed such that said top surfaces of said plurality of said floor thickness guides is co-planar.

10          20. The system of claim 17, wherein said interconnection of said floor-and-beam forming elements is such that a top surface of said floor-forming supports is substantially co-planar.

21. The system of claim 17, wherein said interconnection includes attachment of two adjacent floor-forming supports.

15          22. The system of claim 17, wherein said support plates have an outer contour that is substantially equivalent to a cross section of an area below said floor-forming support, between said adjacent ones of said beam-forming troughs and a line connecting bottom surfaces of said adjacent ones of said beam-forming troughs.

23. The system of claim 22, wherein said plurality of support plates are deployed such that tabs protruding from edges of said support plates are inserted through corresponding slots provided in said floor-and-beam forming elements, thereby providing a plurality of anchoring points for said concrete.

5        24. The system of claim 17, wherein at least one of said plurality of support plates includes precut holes to accommodate plumbing and electrical components.

10      25. The system of claim 17, further comprising a false bottom deployed in at least one said beam-forming trough so as to prevent said fluid concrete from flowing therein so as to form a void in a bottom region of said beam-forming trough into which fasteners penetrate, thereby facilitating attachment of ceiling finishing material.

15      26. The system of claim 17, further comprising at least one end sealing plate configured to seal at least one end of an area below said floor-forming support and between said adjacent ones of said beam-forming troughs, said end sealing plate deployed substantially adjacent to said at least one end and projecting downwardly substantially perpendicular to said floor-forming supports and substantially perpendicular said beam-forming troughs.

20      27. The system of claim 17, wherein said floor-and-beam forming element is fabricated from steel.

28. A system for the fabrication of a wall comprising a plurality of interconnected substantially rectangular wall-forming elements deployed on a floor, each said wall-forming element configured with at least two substantially parallel spaced apart substantially rectangular wall panels, wherein an outer 5 surface of each of said wall panels is configured as a substantially finished wall surface, said at least two wall panels being coupled at each of four corners of said rectangle by wall-panel corner-connecting elements, wherein a volume of fluid concrete is poured so as to substantially fill a region between said wall panels.

10        29. The system of claim 28, wherein each one of said plurality of said wall-forming elements is interconnected to adjacent ones of said plurality of said wall-forming elements by attachment of adjacent ones of said wall-panel corner-coupling brackets one to another.

15        30. The system of claim 29, wherein said wall-panel corner-connecting element is a substantially "L" shaped element, said wall-panel corner-connecting element thereby spanning at least a partial length of two sides of said wall-forming element when attached to said wall panels.

20        31. The system of claim 30, wherein said adjacent ones of said wall-panel corner-coupling brackets is attached one to another using self-tapping sheet metal screws.

32. The system of claim 30, wherein said wall panels include a lengthwise groove in each edge surface of each said wall panels into which a tongue protruding from each said wall-panel corner-coupling bracket is affixed.

33. A method for fabrication of a building foundation constructed on a  
5 pre-graded site comprising:

- (a) deploying a layer of gravel so as to cover a per-defined surface area of the site to a predefined depth;
- (b) deploying on said layer of gravel a symmetrical arrangement of a plurality of spaced apart foundation cavity forms so as to form trough regions between adjacent ones of said foundation cavity forms, said symmetrical arrangement substantially covering a predefined surface area of said gravel, said foundation cavity forms configured so as to form a cavity region thereunder;
- (c) erecting a foundation boarder so as to define a periphery of the foundation;
- (d) deploying an amount of fluid concrete within said foundation boarder so as to substantially fill said trough regions and a region above said foundation cavity forms to a substantially uniform predefined depth, and said foundation cavity forms prevent the flow of said fluid concrete into said cavity region;
- (e) leveling a top surface of said concrete; and
- (f) allowing said concrete to cure.

34. The method of claim 33, wherein said foundation cavity forms are implemented as four connected side panels connected to a top panel configured from at least one piece of material.

35. The method of claim 34, wherein said at least one piece of material  
5 is implemented as a sheet of metal.

36. The method of claim 33, further comprising deploying floor support elements projecting upwards from said top surface of said concrete so as to support a floor a distance of between 0.5 – 1.5 meters above said top surface, thereby forming a service space between said top surface and bottom surface of  
10 said floor.

37. A building foundation for deployment on a pre-graded site covered by a layer of gravel, the building foundation comprising:

- (a) a symmetrical arrangement of a plurality of spaced apart foundation cavity forms deployed on the layer of gravel so as to form trough regions between adjacent ones of said foundation cavity forms, said symmetrical arrangement substantially covering a predefined surface area of the gravel, said foundation cavity forms configured so as to form a cavity region thereunder;  
15 and
- 20 (b) a foundation boarder erected so as to define a periphery of the foundation;

wherein an amount of fluid concrete is deployed within said foundation boarder so as to substantially fill said trough regions and a region above said foundation cavity forms to a predefined depth, and said foundation cavity forms prevent the flow of said fluid concrete into said cavity region.

5           38. The building foundation of claim 33, wherein said foundation cavity forms are configured as four connected side panels connected to a top panel configured from at least one piece of material.

39. The building foundation of claim 34, wherein said at least one piece of material includes a sheet of metal.

10          40. The building foundation of claim 33, further comprising floor support elements projecting upwards from said top surface of said concrete so as to support a floor a distance of between 0.5 – 1.5 meters above said top surface, thereby forming a service space between said top surface and bottom surface of said floor.

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